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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/888,595

06/26/2001

Scott Andrew Patten

8653

7590

02/11/2004

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EXAMINER

CULLER, JILL E

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,595

Applicant(s)

PATTEN ET AL.

Examiner

Jill E. Culler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: In claim 3, line 2, the recitation of the "write radiation source" has improper antecedent basis. It appears that applicant may have intended to use "write radiation beam" instead. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5-6, 12, 14-16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,058,500 to Mizuno in view of U.S. Patent No. 5,737,090 to Christopher et al.

With respect to claim 1, Mizuno teaches a method of preparing a lithographic printing surface, said method comprising the steps of: imaging a test pattern on a lithographic printing precursor, 21, to create by means of said imaging an imaged lithographic printing precursor using at least one write radiation beam; see column 6, lines 12-17, converting said imaged lithographic printing precursor into said lithographic printing surface; see column 6, lines 19-22, reading back said test pattern from said lithographic printing surface using a radiation source, 111, impinging on said test pattern

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and a radiation detector, 112, disposed to measure the reflected radiation from said test pattern, see column 6, lines 26-31 and 41-45, and analyzing said reflected radiation.

See column 7, line 61-column 8, line 7.

Mizuno does not teach using the analysis to determine optimal adjustment for image processing parameters.

Christopher et al. teaches a method of adjusting image processing parameters including imaging a test pattern, reading back the test pattern from the printing surface and analyzing the results to determine optimal adjustment for image processing parameters. See column 3, lines 12-38.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the analyzed test pattern of Mizuno to determine an optimal adjustment for image processing parameters, as taught by Christopher et al., in order to maintain better control over the quality of the lithographic printing plates produced by the process of Mizuno.

With respect to claims 3 and 14, Mizuno does not teach that the imaging process parameter or the radiation detector is used in determining the focusing of the write radiation source onto the surface of the lithographic printing precursor.

Christopher et al. teaches using information read from the printing surface to determine the focus of a radiation source onto the surface. See column 15, lines 17-64.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the focusing method of Christopher et al. to focus the write radiation

beam of Mizuno in order to provide more accurate imaging of the printing plate precursor.

With respect to claims 5 and 6, it would have been obvious to one having ordinary skill in the art at the time of the invention to use a test pattern of any preferred design, as the effective comparison between this pattern and a reference image should not depend upon the nature of the pattern which has been used.

With respect to claim 12, Mizuno teach that the radiation detector is a photosensitive detector, 117. See column 6, lines 56-60.

With respect to claim 15, Mizuno does not teach that the analyzing step comprises performing a mathematical curve fit to the measurements of the reflected radiation.

Christopher et al. teaches using a curve fit to determine the adjustment of operating parameters. See column 15, line 52 - column 16, line 26.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use a curve, as in Christopher et al., to analyze the measurements of Mizuno in order to provide more accurate adjustment of the imaging parameters.

With respect to claim 16, Mizuno teaches that the converting step comprises passing the lithographic printing precursor through a processing line. See column 6, lines 19-25.

With respect to claim 24, Mizuno teaches an apparatus for generating a lithographic printing surface comprising: means for imaging a test pattern on a lithographic printing precursor, 13, and converting said lithographic printing precursor

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into a lithographic printing surface, 14, see column 6, lines 11-25, a radiation source disposed so as to direct its radiation onto the imaged test pattern, 111; a radiation detector disposed so as to receive reflected radiation from said imaged test pattern, 112, see column 6, lines 21-36 and 41-45, and means of processing the detected radiation. See column 7, line 61-column 8, line 7.

Mizuno does not teach that this means is used to determine optimal adjustment of the imaging parameters of the apparatus.

Christopher et al. teaches using measurements of an imaged test pattern determine optimal adjustment for image processing parameters. See column 3, lines 12-38.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the analyzed test pattern of Mizuno to determine an optimal adjustment for image processing parameters, as taught by Christopher et al., in order to maintain better control over the quality of the lithographic printing plates produced by the process of Mizuno.

4. Claims 2, 7-8, 10-11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al., as applied to claims 1, 3, 5-6, 12, 14-16 and 24 above, and further in view of U.S. Patent No. 5,790,275 to Iizuka.

With respect to claim 2, Mizuno and Christopher et al. teach all that is claimed, as in the above rejection of claims 1, 3, 5-6, 12, 14-16 and 24, except that the imaging process parameter is exposure level.

Iizuka teaches modifying the exposure level of a radiation beam based on reflected radiation values. See column 11, lines 5-32.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the method of Mizuno, as modified by Christopher et al., to adjust the exposure level of the radiation beam, as taught by Iizuka, in order to maintain better control over the quality of the lithographic printing plates produced by the process of Mizuno.

With respect to claims 7 and 8, Mizuno and Christopher et al. teach all that is claimed, as in the above rejection of claims 1, 3, 5-6, 12, 14-16 and 24, except that the radiation source is a laser source.

Iizuka teaches using a laser as a radiation source for reading a pattern from an imaged surface. See column 2, lines 5-8.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the laser of Iizuka with the method of Mizuno, as modified by Christopher et al., in order to have a radiation source of significant accuracy.

With respect to claim 10, Mizuno and Christopher et al. teach all that is claimed, as in the above rejection of claims 1, 3, 5-6, 12, 14-16 and 24, including the teaching of Christopher et al. to use information read from the printing surface to determine the focus of a radiation source onto the surface, see column 15, lines 17-64, as described in the above rejection with respect to claims 3 and 14.

With respect to claim 11, Mizuno and Christopher et al. teach all that is claimed, as in the above rejection of claims 1, 3, 5-6, 12, 14-16 and 24, except that the radiation source is also used to perform the imaging.

Iizuka teaches a radiation source for detecting a pattern which also may be used to perform imaging of the pattern. See column 2, lines 59-62.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Mizuno, as modified by Christopher et al., to have the same radiation source for detecting a pattern for performing imaging of the pattern, as taught by Iizuka, in order to reduce the size and cost of the apparatus.

With respect to claim 19, Mizuno teaches a method for imaging a lithographic printing precursor comprising the steps of: forming a test pattern on said lithographic printing precursor, see column 6, lines 12-17, converting said lithographic printing precursor into a lithographic printing surface, see column 6, lines 19-22, and measuring the reflectivity of said test pattern on said lithographic printing surface. See column 6, lines 26-31 and 41-45.

Mizuno does not teach adjusting the calibration of said system based on the measured reflectivity or that the formation of the test pattern and the measurement of the reflectivity is performed using the same imaging system.

Christopher et al. teaches a method of calibrating a system including imaging a test pattern, reading back the test pattern from the printing surface and analyzing the results to determine optimal adjustment for image processing parameters. See column 3, lines 12-38.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the analyzed test pattern of Mizuno to determine a calibration for the system, as taught by Christopher et al., in order to maintain better control over the quality of the lithographic printing plates produced by the process of Mizuno.

Iizuka teaches a radiation source for detecting a pattern which also may be used to perform imaging of the pattern. See column 2, lines 59-62.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Mizuno to have the same radiation source for detecting a pattern for performing imaging of the pattern, as taught by Iizuka, in order to reduce the size and cost of the apparatus.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al. and Iizuka as applied to claims 2, 7-8, 10-11 and 19 above, and further in view of U.S. Patent No. 4,718,340 to Love, III.

Mizuno, Christopher et al. and Iizuka teach all that is claimed, as in the above rejection of claims 2, 7-8, 10-11 and 19, except that the imaging is done by a plurality of write radiation beams, that the imaging process parameter is the relative exposure of the plurality of write radiation beams and that each individual beam is adjusted to impart a substantially equal exposure to the lithographic printing precursor.

Love, III teaches imaging done by a plurality of write radiation beams with each individual beam is adjusted to impart a substantially equal exposure to the lithographic printing precursor. See column 11, line 56 - column 12, line 24.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Mizuno, as modified by Christopher et al., and Iizuka, to use the plurality of write radiation beams of Love, III in order to be able to simultaneously image many areas of the printing plate precursor, thereby completing the imaging more quickly.

6. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al. and Iizuka as applied to claims 2, 7-8, 10-11 and 19 above, and further in view of U.S. Patent No. 4,553,033 to Hubble, III et al.

Mizuno, Christopher et al. and Iizuka teach all that is claimed, as in the above rejection of claims 2, 7-8, 10-11 and 19, except that the laser source is an infrared laser and the radiation detector is an infrared detector.

Hubble, III et al. teaches an apparatus for measuring reflected values using an infrared radiation source and an infrared detector. See column 2, lines 19-50.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Mizuno, as modified by Christopher et al. and Iizuka, to use an infrared laser and infrared detector, as taught by Hubble, III et al., as it is conventional and cost-effective to use devices which operate in these wavelengths.

7. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al. as applied to claims 1, 3, 5-6, 12, 14-16 and 24 above, and further in view of U.S. Patent No. 5,924,364 to Grabley et al.

Mizuno and Christopher et al. teach all that is claimed, as in the above rejection of claims 1, 3, 5-6, 12, 14-16 and 24, except that the converting is done simultaneously with the imaging step and the converting comprises removing debris generated while the imaging is in progress.

Grabley et al. teaches a method for imaging a printing plate precursor in which the converting is done simultaneously with the imaging step and comprises removing debris generated while the imaging is in progress. See column 6, lines 1-14.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the converting process of Grabley et al. with the method of Mizuno, as modified by Christopher et al., to reduce the amount of equipment required for the imaging and conversion process.

8. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al. and Love, III.

Mizuno teaches a method for imaging a lithographic printing precursor comprising the steps of: forming a test pattern on said lithographic printing precursor, see column 6, lines 12-17, converting said lithographic printing precursor into a lithographic printing surface, see column 6, lines 19-22, and measuring the reflectivity of

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said test pattern on said lithographic printing surface. See column 6, lines 26-31 and 41-45.

Mizuno does not teach adjusting the calibration of said system based on the measured reflectivity or that the system is a direct on-press imaging system in which the converting step is accomplished by running the press for sufficient printing cycles after the imaging step to perform the conversion of the lithographic printing precursor into the lithographic printing surface.

Christopher et al. teaches a method of calibrating a system including imaging a test pattern, reading back the test pattern from the printing surface and analyzing the results to determine optimal adjustment for image processing parameters. See column 3, lines 12-38.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the analyzed test pattern of Mizuno to determine a calibration for the system, as taught by Christopher et al., in order to maintain better control over the quality of the lithographic printing plates produced by the process of Mizuno.

Love, III teaches direct on-press imaging system, see column 1, lines 5-18, in which the converting step is accomplished by running the press for sufficient printing cycles after the imaging step to perform the conversion of the lithographic printing precursor into the lithographic printing surface. See column 14, lines 11-26.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the method of Mizuno with a direct on-press imaging system, with a converting step carried out as taught by Love, III, because this system allows the

printing image to be changed and the conversion to be carried with minimal interruption of the printing process.

9. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Christopher et al. and Love, III, as applied to claims 20-21 above, and further in view of U.S. Patent No. 5,713,287 to Gelbart.

Mizuno, Christopher et al., and Love, III teach all that is claimed, as in the above rejection of claims 20-21, except that the lithographic printing precursor is prepared by applying the imageable coating directly to the press cylinder by spraying a substantially liquid coating directly onto the press cylinder.

Gelbart teaches a method for imaging a lithographic printing precursor in which the lithographic printing precursor is prepared by applying the imageable coating directly to the press cylinder by spraying a substantially liquid coating directly onto the press cylinder. See column 5, lines 15-19.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the invention of Mizuno, as modified by Christopher et al. and Love, III, to apply an imageable coating directly to the press cylinder, as taught by Gelbart, in order to provide a seamless and easily renewable surface for imaging.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 4,002,829 to Hutchison, U.S. Patent No.

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4,393,411 to Amtower, U.S. Patent No. 5,440,398 to Holowko et al. and U.S. Patent No. 5,816 164 to Loffler each teach a method of evaluating image information having obvious similarities to the claimed subject matter.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill E. Culler whose telephone number is (703) 308-1413. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jec


Dan Colilla
Primary Examiner
Art Unit 2854